

**SECRET**

ILLEGIB

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300040037-6

June 4, 1969

25X1A

TECHNICAL MEMORANDUM

25X1A

2200901-TM-69- 1

25X1A

PRODUCT EVALUATION

25X1A

[ ] review of evaluation procedures to date has uncovered certain facets of the problem which warrant further consideration in detail. This memorandum is an attempt to define these areas and to delineate those in which additional guidelines must be developed.

First, it must be noted that there are two sets of pressures which are not simply reducible to common ground. These are:

1. The impetus toward more quantitative measurement.
2. The requirement that all evaluation be oriented toward photointerpretability.

The obvious quandary here lies in the non-availability of suitable quantitative measures of image quality which are both acceptably sensitive and readily relatable to interpreter performance. Present efforts to achieve an evaluation based almost exclusively on PI reaction do not appear capable of expansion into a more meaningful description of results. For example, demands on PI time must be minimized for obvious reasons. Also, the PI community is understandably target intelligence oriented rather than engineering oriented. Furthermore, the detailed quantitative evaluation of large volumes of photography is a sizeable undertaking in terms of manpower and technique development.

DECLASS REVIEW BY NGA / DoD

GROUP 1

EXCLUDED FROM AUTOMATIC  
DOWNGRADING AND  
DECLASSIFICATION

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300040037-6

**SECRET**

**NOTICE**

THIS MATERIAL CONTAINS INFORMATION AFFECTING THE  
DEFENSE OF THE UNITED STATES WITHIN THE  
MEANING OF THE ESPIONAGE LAWS, TITLE 18, USC,  
SECS. 793 AND 794, THE TRANSMISSION OR REVELATION  
OF WHICH IN ANY MANNER TO AN UNAUTHORIZED PERSON  
IS PROHIBITED BY LAW.

SECRET

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

25X1A

2

25X1A

The first task undertaken under this study is the specification and formalization of evaluation techniques applicable to the original negative and ancillary photography. It is the belief of [redacted] that early emphasis must be placed on duplicate evaluation as well, since it is in this regime that photointerpretation takes place. This memorandum does not consider priority but attempts to point out certain areas which are immediately available for improvement of present methods.

25X1A

At the present time, there are several documents produced under various auspices [redacted] and a host of less formal communications and studies. Much of the data incorporated therein is historical and/or of a purely engineering nature.

There is evidence of better delineation of evaluation responsibility to come in future systems. At the present time, it is highly desirable that any such new work undertaken by APSD be:

1. Exploitation oriented (as opposed to PI oriented)
2. Complementary to other data produced and drawing from that data as much as possible.
3. Directed toward improvement of product from an exploitation point of view.

Several areas are both important and not now well covered. These include:

1. Continuous monitoring of the geometric integrity of collection systems and the evaluation of mensuration capability.
2. Duplicate evaluation directed toward the product actually received by the customer.
3. Stellar/index evaluation, particularly quantitative evaluation related to stellar magnitude.

25X1A

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

ILLEGIB

SECRET

SECRET

25X1A

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

3

4. Isolation of cause and effect in print failure.
5. Continuous monitoring of special printing requirements with emphasis on evidence of failure of the present uniform production policy.
6. Detailed investigation of poor coverage reported.
7. Quantitative evaluation of data block and time traces.
8. Evaluation of uncompensated image motion. This is a very difficult problem to attack with micro-densitometry but may be amenable to other approaches.

ILLEGIB

In order to proceed, there are several steps which must be taken:

1. Review and diagram (where not done) the sequence of events leading to evaluation.
2. Perform a comparative analysis of the reports involved with the objective of determining time scales, mutually complementary features, and of establishing the degree to which data collected by other organizations can be analyzed in depth to aid APSD in their own evaluation.

25X1A

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

SECRET

SECRET

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

25X1A

4

3. Identification of areas not covered by existing evaluation and the specification of applicable methodology
4. Identification of data which is collected by external or internal organizations which is not in the optimum time sequence.

Items 2 and 4 bear some consideration. There is more data collected on an average evaluation sequence than is ever used. In fact, the ratio of non-used to used data is probably far greater than is realized. If one could use such data profitably, even well after the fact, to produce an improving trend in product quality, the immediacy of the total evaluation could be sacrificed. It is recognized that certain activity must coincide with schedules. It is not necessary that all work so coincide.

The following comprises a brief program plan for the remainder of the present contract. The objective is to produce, at least in outline form, a compendium of recommended evaluation activity and procedures compatible with the customer's needs, capability and specialization. This compendium will be limited to the evaluation of the primary take and the ancillary photography connected therewith, although recommendations for duplicate evaluation will be formulated concurrently.

Step 1: Present through July 15, 1969.

Evaluate reports issued by all agencies,  
define time scales and degree of useability.

Step 2: Concurrent with step 1. Identify  
means of extending target evaluation  
by subjectively related methods.

Step 3: July 15 - August 31, 1969. Define  
implementable methodology for extending  
evaluation of stellar/index camera systems  
and photogrammetric integrity of primary  
systems.

25X1A

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

SECRET

SECRET

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

5

25X1A

Step 4: August 31 - September 30, 1969.

Construct a model handbook for evaluation  
of original and stellar/index take, together  
with a recommended schedule for such evaluation.

Step 5: September 30 - October 21, 1969.

Final Report preparation and delivery.

The present schedule of visits and consultation will be continued and expanded as needed. Discussion with the customer regarding resources and goals will continue, as will a detailed investigation of means whereby existing data may be more fully exploited.

25X1A

Approved For Release 2005/02/17 : CIA-RDP78B04767A000300010037-6

SECRET